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(71) Applicant (for all designated States except US):  
**SOUTHAMPTON PHOTONICS LIMITED** [GB/GB];  
3 Wellington Park, Tollbar Way, Hedge End, Southampton  
SO30 2QU (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ZERVAS, Mikhall**,  
**Nicholaos** [GR/GB]; 34 Hill Farm Road, Southampton,  
Hampshire SO15 5SR (GB). **GHIRINGHELLI, Fabio**  
[IT/GB]; 16 Bassett Crescent East, Bassett, Southampton  
SO16 7PB (GB).

(74) Agent: **JONES, Graham, Jones**; Graham Jones & Com-  
pany, 77 Beaconsfield Road, Blackheath, London SE3 7LG  
(GB).

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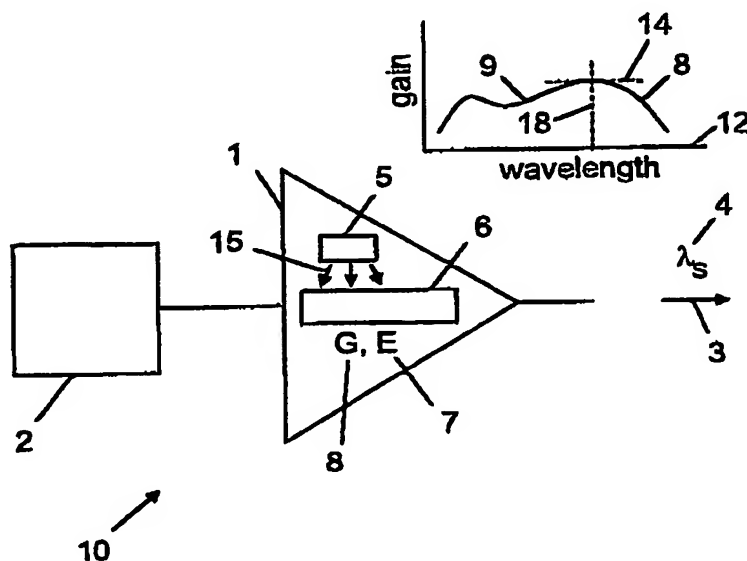
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(54) Title: LD PUMPED FIBRE AMPLIFIER WITH SECOND RESONATOR OR INPUT SIGNAL FOR GAIN LIMITATION



(57) Abstract: Apparatus (10) for providing optical radiation (3) having a signal wavelength  $\lambda_s$  (4), which apparatus (10) comprises at least one pump (5) for providing pump radiation (15), a gain medium (6), and energy limiting means (2), in which the pump radiation (15) acts on the gain medium (6) to provide stored energy (7) and gain (8) for optical amplification, characterised in that the gain (8) has a maximum gain (14) at a wavelength (18) at which the maximum gain occurs (14), and the energy limiting means (2) limits the maximum gain (14) and the amount of stored energy (7) that is able to be stored to values below those at which the stored energy (7) will cause damage to the apparatus (10).